

### Abstract of the Disclosure

The present invention relates to a method for fabricating a capacitor employing ALD-TiN as an upper electrode and being suitable for preventing a deterioration of a leakage current property which uses an ALD-TiN as an upper electrode. The method for fabricating the capacitor includes: forming a lower electrode on a semiconductor substrate; forming a dielectric layer on the lower electrode; loading the semiconductor substrate containing the dielectric layer into a deposition chamber; nitriding a surface of the dielectric layer while  $\text{NH}_3$  gas is flowed into the deposition chamber; and forming an upper layer by using a source gas  $\text{NH}_3$ , containing Titanium (Ti) on the nitrated surface of the dielectric layer through an atomic layer deposition (ALD) method.